2008 Engineering Conference Breakout Period 4.

5. Visualization for use in Design, with Public Involvement in mind
Track: Design
Presenters: Paul Wheeler
Synopsis: This session will take a look at the benefits and uses of visualization for planning, public involvement, design, construction and other areas. This session will also look at where visualization will be going in the future focusing on augmented reality, visual simulators, structured public involvement, and 3D Design.
Time Required: 50 Minutes

32. PeMS in Action (Performance Monitoring System)
Track: ITS / Traffic Management / Safety
Presenters: Glenn Blackwelder
Synopsis: A hands-on look at how anyone can access the Traffic Operations Center's archived traffic volumes, speeds and occupancies. The new Performance Measurement System (PeMS) allows users to access the TOC's data via the web in a wide variety of formats. We will demonstrate the several uses of PeMS and then provide an interactive session where we demonstrate what PeMS can do based on questions from the audience.
Time Required: 50 minutes

33. Crashes in Vicinity of Major Crossroads
Track: ITS / Traffic Management / Safety
Presenters: Grant G. Schultz, Ph.D., P.E., PTOE; Charles Allen, EIT
Synopsis: The American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets* (AASHTO Green Book) states that "…driveways should not be located within the functional area of an intersection or in the influence area of an adjacent driveway. The functional area extends both upstream and downstream from the physical intersection area and includes the longitudinal limits of auxiliary lanes. The influence area associated with a driveway includes (1) the impact length (the distance back from a driveway that cars begin to be affected), (2) the perception-reaction distance, and (3) the car length" (p. 729). Past research has explored the effect of crossroads in the vicinity of interchanges and the impact that these crossroads have on capacity and safety. Past research has not, however, extended this impact to include major intersections or crossroads along arterial streets. The purpose of this research is to answer the questions associated with the impact of accesses in the vicinity of major arterial crossroads by examining midblock crashes and their proximity to such crossroads. Some of the questions to answer include: What percent of the crashes occur within the functional area? What is the severity of crashes as a function of their proximity to major crossroads? What are the advantages of designing intersections with access points well beyond the functional area and the major crossroad? These and other questions need to be answered as a function of driveway density and conflict points and presented in this session.
Time Required: 50 minutes

45. Meeting Your Infrastructure Challenges Through the Utilization of Private Sector Service Providers
Track: Maintenance
Primary Contact: Andrea Warfield
Presenters: Andrea Warfield (VMS, Inc.), Lloyd Neeley
Synopsis: What are the challenges you face in operating and maintaining your current infrastructure? Rising maintenance costs and needs, resource availability, qualified subcontractor issues, asset management compliance, performance accountability, customer expectations? Private industry service providers are partnering these public-sector challenges through innovative, client-specific operations and maintenance programs. This session will address these programs through several case studies of successful operations and maintenance contracts currently underway in parts of the U.S., Australia and Canada.
Time Required: 50 minutes

47. The "New Design Network"
Track: Project Management
Presenter: Dave Adamson, H.G. Kunzler (Lochner)
Synopsis: The "New Design Network" is now out for use. This design network is the product of many hours of dedicated work from many people in and out of the UDOT. This network will be a better model for the way that the department delivers projects. This training session will be a general overview of the network. We will also discuss the logic and features of the "New Design Network".
Time Required: 50 Minutes

63. Passing and Climbing lane Prioritization
Track: System Planning and Programming
Presenters: Dan Kuhn (UDOT Freight Planner)
Vern Keeslar (Interplan)
Synopsis: Evaluate the needs for passing and climbing lanes on Utah's primary freight corridors (both Interstate Highways and two-lane US and State Routes), while showing how to prioritize needs in these areas using several criteria
Time Required: 50 Minutes

67. Think Green, Think Concrete
Track: Materials
Presenters: Todd Laker, Holcim
Synopsis: "As the construction industry is becoming more and more "Green" it is important to understand how cement and concrete can also be environmentally friendly and sustainable. The Concrete industry has sustainable initiatives that are greatly affected by specifications, however blended cements and performance concretes are gaining acceptance. These products help cut CO2 emissions, lower energy consumption and are engineered to perform equal to conventional concretes. This presentation will explore sustainable options and solutions in the cement and concrete industry."
Time Required: 50 minutes

76. Performance Measures - Where are we at?
Track: Leadership/Organizational Issues
Presenters: Jim McMinimee
Synopsis: A review of UDOT's dashboard which consists of performance indicators/measures that assist executives in assessing the health of the Federal-Aid Highway Program (FAHP). The performance indicators/measures enable the FHWA and the UDOT to monitor program performance and proactively implement corrective actions when needed.
Time Required: 50 minutes